

## Abstract

A problem of the invention is to provide a wide band modulation PLL having an excellent modulation accuracy at low cost.

With respect to a PLL portion including VCO (21), a divider (22), a phase comparator (23), and a loop filter (24), a dividing ratio of the divider (24) is modulated by a dividing ratio generating portion (29) by controlling a control voltage of VCO (21) by a control signal generating portion (30). VCO (21) includes two control terminals, and the control signal generating portion (30) inputs the control signal to one of the control terminals. In controlling a modulation degree, the dividing ratio generating portion (29) is inputted with a calibration data  $f_{c1}$  and the control signal generating portion (30) is inputted with a calibration data  $f_{c2}$ . A demodulator (31) demodulates output signals of VCO (21) when the respective calibration data are inputted and modulation degree controlling means (32) outputs a modulation degree control signal to the control signal generating portion (30) based on the demodulated signals.